

# ALTO SHAAM®

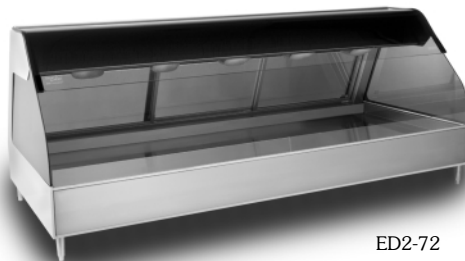
## OPERATION and CARE MANUAL



ED2-48



ED2-96



ED2-72

### HEATED DISPLAY CASES

#### REACH-IN

**ED2-48**

**ED2SYS-48**

**ED2-72**

**ED2SYS-72**

**ED2-96**

**ED2SYS-96**

#### SELF-SERVICE

#### & PASS-THRU

**ED2-48/P**

**ED2-72/PL**

**ED2-72/PR**

**ED2-96/PL**

**ED2-96/PR**



### COOK/HOLD/SERVE SYSTEMS



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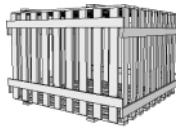
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[www.alto-shaam.com](http://www.alto-shaam.com)

# ALTO-SHAAM. HEATED DISPLAY CASES

## UNPACKING & SET-UP



The Alto-Shaam Heated Display Case has been thoroughly tested, checked for calibration, and inspected to insure only the highest quality unit is provided. When you receive your case, check for any possible shipping damage and report it at once to the delivering carrier. See

*Transportation Damage and Claims* section located in this manual.

In order to maintain established National Sanitation Foundation standards, all stationary floor models must be sealed to the floor with a R.T.V. or silastic meeting N.S.F. requirements or have 6" (153mm) unobstructed clearance beneath the unit.

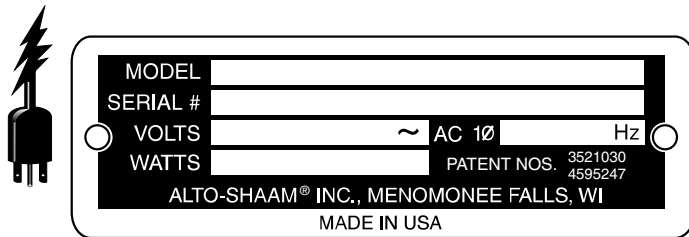
Counter and table units must be mounted on legs of a sufficient 4" (102mm) height to provide minimum unobstructed space beneath the unit. These legs are supplied with the unit. Warranty will become null and void if these directions are not followed.

Save all the information and instructions packed inside the display case. Complete and return the warranty card to the factory as soon as possible to assure prompt service in the event of a warranty parts and labor claim.

**NOTE:** Any and all claims for warranty must include the full model and serial number of the display case.

## ELECTRICAL INSTALLATION

If necessary, permanent wiring or electrical outlets for this display case must be installed by an licensed electrician in accordance with local, country or national codes.



An identification tag is permanently mounted on case. Plug the case into a properly grounded receptacle **ONLY**. Arcing will occur when connecting or disconnecting the display case unless all controls are in the OFF position. Always position the appliance so the power supply cord is easily accessible in case of emergency.



**ENSURE POWER SOURCE MATCHES  
VOLTAGE STAMPED ON  
NAMEPLATE OF UNIT**

## OPERATING PROCEDURES

### 1. DO NOT ADD WATER TO DISPLAY CASE

Halo Heat display cases maintain a constant but gentle temperature and eliminate much of the moisture loss associated with conventional display cases. Because of this gentle heat, it is not necessary to add water to the display case. As a matter of fact, **adding water is not recommended** since water will accelerate the deterioration of the product, and may damage the unit voiding the warranty.

### 2. PLACE DIVIDERS and SERVING PANS IN CASE

Refer to the pan layout diagrams for different types of pan accommodations. A complete pan configuration layout is located in this manual. **It is VERY important to note**, no matter what type of pan configuration chosen, pan separator bars or divider bars must be used to close all gaps between pans, and all gaps between the pans and the edges of the display case. If these gaps are not closed, heat will escape from the bottom of the case into the display area. As a consequence, heat distribution will be uneven and uniform temperature will be difficult to hold. If needed, additional pan divider bars are available.

### 3. TURN DISPLAY LIGHTS "ON" AND SET THE THERMOSTAT(s) AT NUMBER "10" TO PREHEAT

A indicator light will illuminate when the thermostat(s) is (are) turned "ON." The indicator(s) will remain lit as long as the unit is preheating or calling for heat. The unit should be preheated, at the number **10** setting, for a minimum of thirty minutes before loading the case with hot food. When preheating is completed, or whenever the unit reaches any temperature set by the operator between **1** and **10**, the indicator light(s) will go "OUT".

### 4. LOAD HOT FOODS INTO DISPLAY CASE

Be certain only hot food is transferred into the display case. Before loading food into the case, use a pocket-type meat thermometer to make certain all products have reached an internal temperature of 140° to 160° F (60° to 71°C). If any food product is not at proper serving temperature, use a Halo Heat cooking and holding oven, set at 250° to 275°F (121° to 135°C), or a Combitherm oven to bring the product within the correct temperature range.

- Use hand protection when handling hot items.
- Be certain only hot PREPACKAGED foods in appropriate heat tested containers are used in the self-service section of the display case.
- Do not stack food containers.

### 5. RESET THERMOSTAT(S) AS NEEDED

After all products are loaded into the display case and the doors are closed, it is necessary to reset the thermostat(s). For fully enclosed sections, reset the thermostat to the number "8" setting. Cases with a self-service section should be maintained between number "9" and number "10" for the self-service section **only**.

THESE SETTINGS WILL NOT NECESSARILY BE FINAL.

Since proper temperature range depends on the type of products and the quantities being held, it is necessary to periodically use a pocket thermometer to check each item to make certain the correct temperatures are being maintained. Proper temperature range is between a minimum of 140° and 160° F (60° and 71° C). Normally, this will require a thermostat setting of between number "6" and "8" in fully enclosed cases. Self-service cases or sections will always require a higher thermostat setting.

## OPERATING PROCEDURES *continued*

### 6. PLACEMENT OF FOOD PROBE

If the unit is equipped with the probe accessory, wipe each probe and probe tip with a disposable alcohol pad to clean and sanitize before using. If the probe is left in its bracket, the LED temperature display will indicate the ambient air temperature inside the case. To place a probe into food kept in the case, remove the probe from the bracket and push the probe tip halfway into the product, positioning the tip at the center of the food mass. If placing into solid foods such as meat roast or poultry breasts, push the probe in from a straight downward position or in from the side to the center position. If placing into a semi-liquid or liquid product, the probe cable will probably need to be secured to keep the probe positioned properly. Do not let the probe tip touch the edges or sides. Tape the probe cable to the lip or edge of the container. Wipe each probe tip with a clean paper towel to remove food debris after each use. Follow by wiping probes with a disposable alcohol pad, and return each probe to the proper bracket position.

### 7. SERVE FRESH HOT FOOD

Keep hot foods looking fresh. Occasionally stir or rotate food as needed. Serve food products in appropriate heat tested packages or containers. Keep display case doors closed after serving. Wipe spills immediately to assure maximum eye appeal and to ease end of the day cleanup.

## CARE and CLEANING

The cleanliness and appearance of this unit will contribute considerably to operating efficiency and savory, appetizing food. Good equipment that is kept clean works better and lasts longer.



### THOROUGHLY CLEAN THE DISPLAY CASE DAILY

- Turn lights and adjustable thermostat(s) to the "OFF" position, and disconnect unit from power source.
- Remove, cover or wrap, and store unused products under refrigeration.
- Clean the interior metal surfaces of the cabinet with a damp cloth and any good alkaline or alkaline chlorinated based commercial detergent or grease solvent at the recommended strength. Use a plastic scouring pad or oven cleaner for difficult areas. Avoid the use of abrasive cleaning compounds, chloride based cleaners, or cleaners containing quaternary salts. Rinse carefully to remove all residue and wipe dry.



**NOTE:** Never use hydrochloric acid (muriatic acid) on stainless steel.

- Clean the glass with a window cleaner.
- To help maintain the protective film coating on polished stainless steel, clean the exterior of the unit with a cleaner recommended for stainless steel surfaces. Spray the


cleaning agent on a clean cloth and wipe with the grain of the stainless steel.

- If the display case is supplied with probes, be sure to clean these probes daily. Remove all food soil from probes. Wipe entire probe and cable assembly with warm detergent solution and a clean cloth. Remove detergent by wiping each probe and cable with clean rinse water and a cloth. Wipe probes with disposable alcohol pad or sanitizing solution recommended for food contact surfaces. Allow probe and cable to air dry in probe holding bracket.

Always follow appropriate state or local health (hygiene) regulations regarding all applicable cleaning and sanitation requirements for food service equipment.

***Never steam clean, or flood the unit with water or liquid solution. Do not use waterjet to clean. Severe damage or electrical hazard could result, voiding the warranty. Disconnect from power source before cleaning or servicing.***





Hood glass extended to the full upright position is stabilized through the use of gas struts designed for the full load bearing weight. These struts could weaken or fail due to wear, environmental conditions or aging. Operators should be aware of any decrease in effort to lift the hood and initiate an immediate gas strut safety check. **DO NOT LIFT THE HOOD IN THIS CONDITION.**

### SAFETY ALERT

This units performance has been optimized using the factory provided bulbs. These bulbs should be replaced with an exact replacement or with a factory recommended replacement. These bulbs have been treated to resist breakage and must be replaced with similarly treated bulbs in order to maintain compliance with NSF standards.



## SANITATION GUIDELINES

Food flavor and aroma are usually so closely related that it is difficult, if not impossible, to separate them. There is also an important, inseparable relationship between cleanliness and food flavor. Cleanliness, top operating efficiency, and appearance of equipment contribute considerably to savory, appetizing foods. Good equipment that is kept clean, works better and lasts longer.

Most food imparts its own particular aroma and many foods also absorb existing odors. Unfortunately, during this absorption, there is no distinction between *GOOD* and *BAD* odors. The majority of objectionable flavors and odors troubling food service operations are caused by bacteria growth. Sourness, rancidity, mustiness, stale or other *OFF* flavors are usually the result of germ activity.

The easiest way to insure full, natural food flavor is through comprehensive cleanliness. This means good control of both visible soil (dirt) and invisible soil (germs). A thorough approach to sanitation will provide essential cleanliness. It will assure an attractive appearance of equipment, along with maximum efficiency and utility. More importantly, a good sanitation program provides one of the key elements in the prevention of food-borne illnesses.

A controlled holding environment for prepared foods is just one of the important factors involved in the prevention of food-borne illnesses. Temperature monitoring and control during receiving, storage, preparation, and the service of foods are of equal importance.

INTERNAL FOOD PRODUCT TEMPERATURES		
HOT FOODS		
<b>DANGER ZONE</b>	40° TO 140°F	(4° TO 60°C)
<b>CRITICAL ZONE</b>	70° TO 120°F	(21° TO 49°C)
<b>SAFE ZONE</b>	140° TO 165°F	(60° TO 74°C)
COLD FOODS		
<b>DANGER ZONE</b>	ABOVE 40°F	(ABOVE 4°C)
<b>SAFE ZONE</b>	36°F TO 40°F	(2°C TO 4°C)
FROZEN FOODS		
<b>DANGER ZONE</b>	ABOVE 32°F	(ABOVE 0°C)
<b>CRITICAL ZONE</b>	0° TO 32°F	(-18° TO 0°C)
<b>SAFE ZONE</b>	0°F OR BELOW	(-18°C OR BELOW)

The most accurate method of measuring safe temperatures of both hot and cold foods is by internal product temperature. A quality thermometer is an effective tool for this purpose, and should be routinely used on all products that require holding at a specific temperature.

A comprehensive sanitation program should focus on the training of staff in basic sanitation procedures. This includes personal hygiene, proper handling of raw foods, cooking to a safe internal product temperature, and the routine monitoring of internal temperatures from receiving through service.

Most food-borne illnesses can be prevented through proper temperature control and a comprehensive program of sanitation. Both these factors are important to build quality service as the foundation of customer satisfaction. Safe food handling practices to prevent food-borne illness is of critical importance to the health and safety of your customers.

HACCP, an acronym for Hazard Analysis (at) Critical Control Points, is a quality control program of operating procedures to assure food integrity, quality, and safety. Taking steps necessary to augment food safety practices are both cost effective and relatively simple. While HACCP guidelines go far beyond the scope of this manual, additional information is available by contacting the USDA/FDA Food-borne Illness Education Information Center at (301)504-6803.

## GENERAL HOLDING GUIDELINES

Chefs, cooks and other specialized food service personnel employ varied methods of cooking. Proper holding temperatures for a specific food product must be based on the moisture content of the product, product density, volume, and proper serving temperatures. Safe holding temperatures must also be correlated with palatability in determining the length of holding time for a specific product.

Halo Heat maintains the maximum amount of product moisture content without the addition of water, water vapor, or steam. Maintaining maximum natural product moisture preserves the natural flavor of the product and provides a more genuine taste. In addition to product moisture retention, the gentle properties of Halo Heat maintain a consistent temperature throughout the cabinet without the necessity of a heat distribution fan, thereby preventing further moisture loss due to evaporation or dehydration.

In an enclosed holding environment, too much moisture content is a condition which can be relieved. A product achieving extremely high temperatures in preparation must be allowed to decrease in temperature before being placed in a controlled holding atmosphere. If the product is not allowed to decrease in temperature, excessive condensation will form increasing the moisture content on the outside of the product.

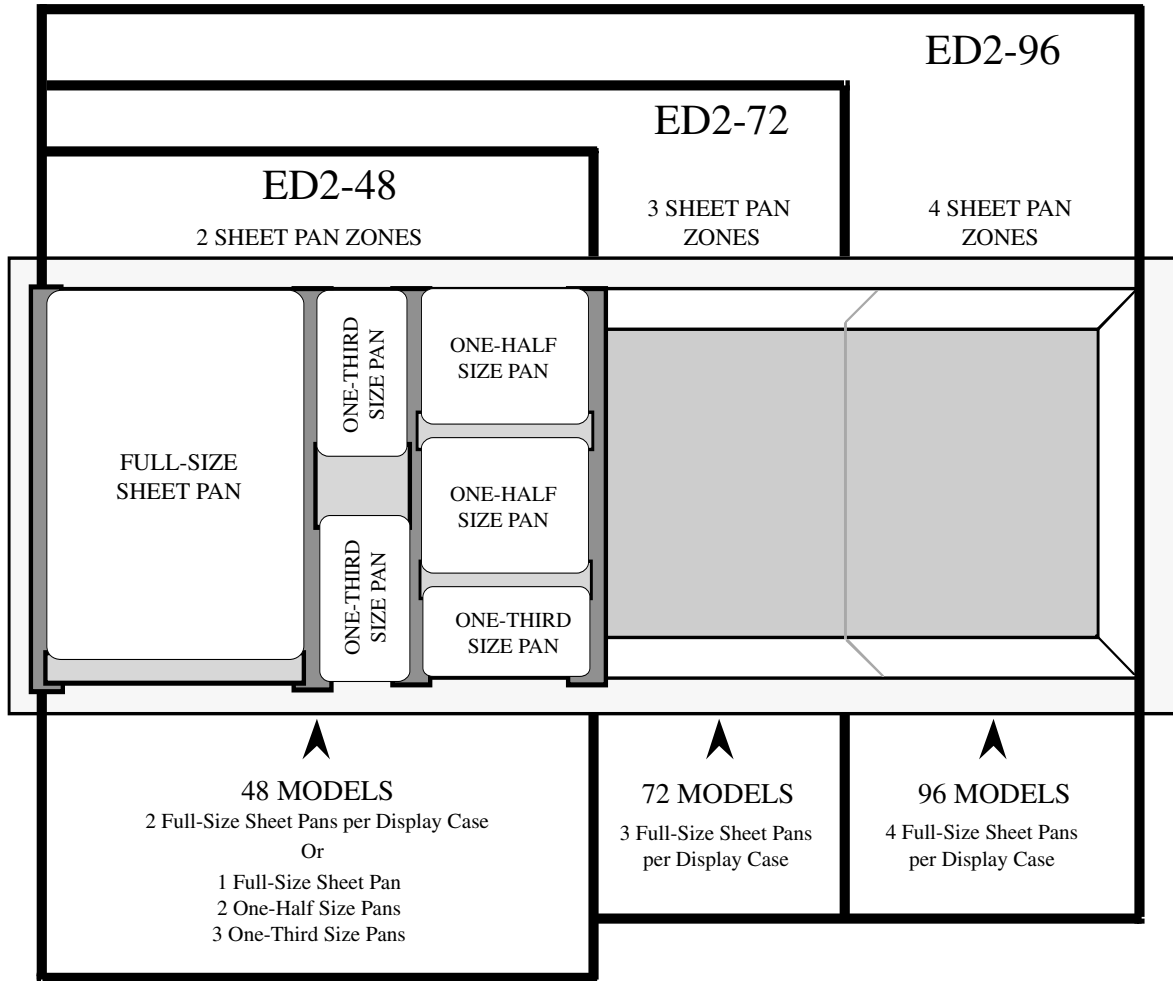
Most Halo Heat Holding Equipment is provided with a thermostat control between 60° and 200°F (16° to 93°C). If the unit is equipped with vents, close the vents for moist holding and open the vents for crisp holding.

If the unit is equipped with a thermostat indicating a range of between 1 and 10, use a metal-stemmed indicating thermometer to measure the internal temperature of the product(s) being held. Adjust the thermostat setting to achieve the best overall setting based on internal product temperature.

HOLDING TEMPERATURE RANGE		
MEAT	FAHRENHEIT	CELSIUS
BEEF ROAST — Rare	140°F	60°C
BEEF ROAST — Med/Well Done	160°F	71°C
BEEF BRISKET	160° — 175°F	71° — 79°C
CORN BEEF	160° — 175°F	71° — 79°C
PASTRAMI	160° — 175°F	71° — 79°C
PRIME RIB — Rare	140°F	60°C
STEAKS — Broiled/Fried	140° — 160°F	60° — 71°C
RIBS — Beef or Pork	160°F	71°C
VEAL	160° — 175°F	71° — 79°C
HAM	160° — 175°F	71° — 79°C
PORK	160° — 175°F	71° — 79°C
LAMB	160° — 175°F	71° — 79°C
POULTRY		
CHICKEN — Fried/Baked	160° — 175°F	71° — 79°C
DUCK	160° — 175°F	71° — 79°C
TURKEY	160° — 175°F	71° — 79°C
GENERAL	160° — 175°F	71° — 79°C
FISH/SEAFOOD		
FISH — Baked/Fried	160° — 175°F	71° — 79°C
LOBSTER	160° — 175°F	71° — 79°C
SHRIMP — Fried	160° — 175°F	71° — 79°C
BAKED GOODS		
BREADS/ROLLS	120° — 140°F	49° — 60°C
MISCELLANEOUS		
CASSEROLES	160° — 175°F	71° — 79°C
DOUGH — Proofing	80° — 100°F	27° — 38°C
EGGS — Fried	150° — 160°F	66° — 71°C
FROZEN ENTREES	160° — 175°F	71° — 79°C
HORS D'OEUVRES	160° — 180°F	71° — 82°C
PASTA	160° — 180°F	71° — 82°C
PIZZA	160° — 180°F	71° — 82°C
POTATOES	180°F	82°C
PLATED MEALS	180°F	82°C
SAUCES	140° — 200°F	60° — 93°C
SOUP	140° — 200°F	60° — 93°C
VEGETABLES	160° — 175°F	71° — 79°C

THE HOLDING TEMPERATURES LISTED ARE SUGGESTED GUIDELINES.

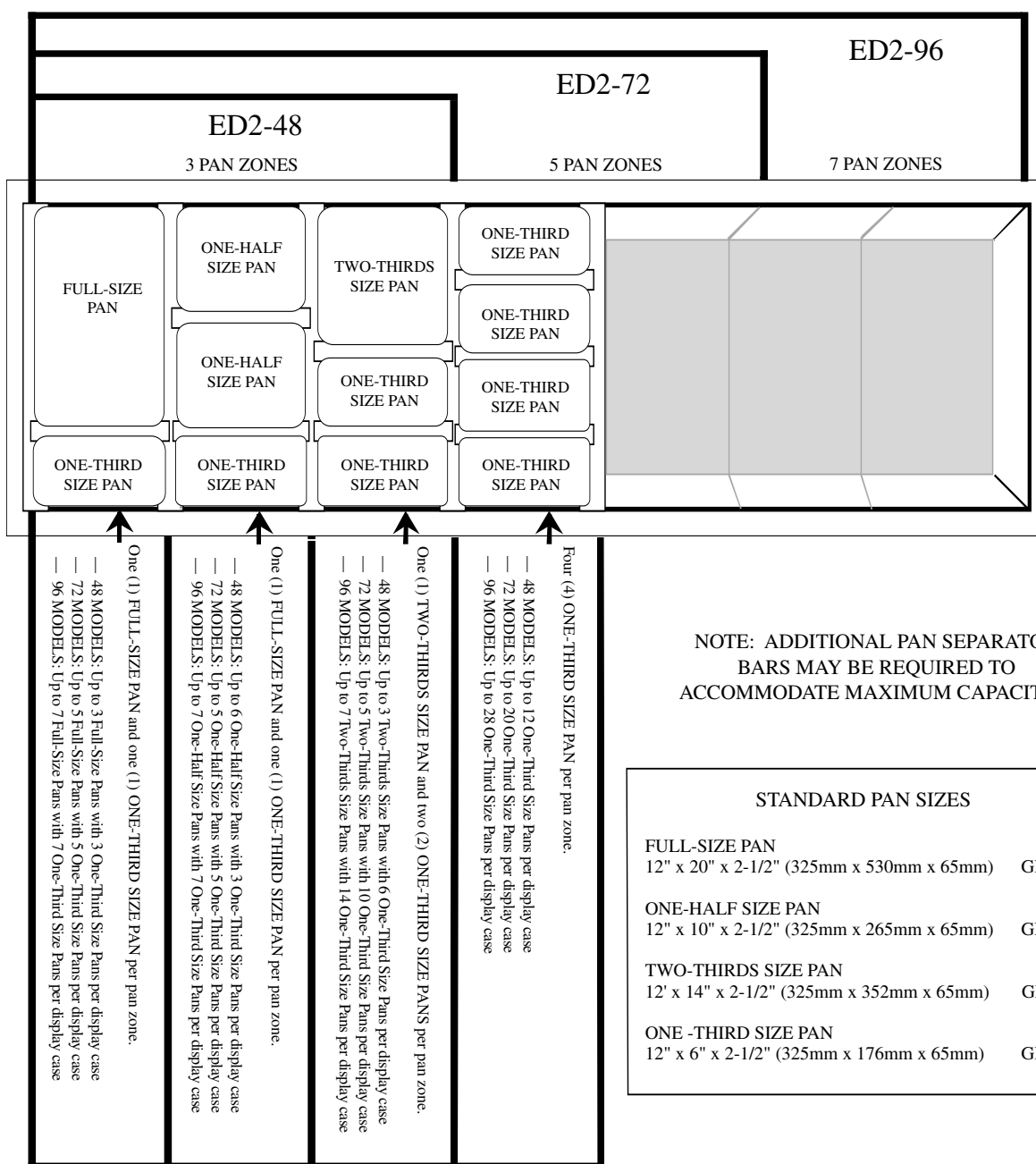
## SHEET PAN CONFIGURATIONS • HEATED DISPLAY CASES



### STANDARD PAN DIVIDER & SEPARATOR BARS

DESCRIPTION	DIMENSIONS	MODELS		
		48	72	96
11046 SHEET PAN DIVIDER BAR	1-3/8" x 27-13/16" (35mm x 706mm)	1	—	—
11047 ONE-THIRD SIZE PAN	3-1/4" x 7" (83mm x 178mm)	1	—	—
1000548 FULL, HALF & THIRD SIZE - LONG	2-19/64" x 27-3/4" (58mm x 705mm)	4	4	—
1001461 FULL, HALF & THIRD SIZE - LONG	1-5/8" x 27-3/4" (41mm x 705mm)	—	—	6
11318 FULL, HALF & THIRD SIZE - SHORT	1" x 12-3/4" (25mm x 324mm)	9	15	21
11319 SHEET PAN DIVIDER BAR	3-1/4" x 27-3/16" (83mm x 706mm)	1	—	—
11320 SHEET PAN DIVIDER BAR	1-3/4" x 17-3/4" (45mm x 451mm)	2	3	4
11357 SHEET PAN DIVIDER BAR	5-29/32" x 27-13/16" (150mm x 706mm)	—	2	3
11732 SHEET PAN FILLER	3-3/4" x 27-13/16" (95mm x 706mm)	—	—	1
1865 GASTRONORM DIVIDER (230V)	7/8" x 27-7/8" (22mm x 708mm)	2	4	6

## PAN CONFIGURATIONS • HEATED DISPLAY CASES



STANDARD PAN DIVIDER and SEPARATOR BARS						
NO.	DESCRIPTION	DIMENSIONS	MODELS			
			48	72	96	
11046	SHEET PAN DIVIDER BAR	1-3/8" x 27-13/16"	(35mm x 706mm)	1	—	—
11047	ONE-THIRD SIZE PAN	3-1/4" x 7"	(83mm x 178mm)	1	—	—
1000548	FULL, HALF AND THIRD SIZE-LONG	2-19/64" x 27-3/4"	(58mm x 705mm)	4	4	—
1001461	FULL, HALF AND THIRD SIZE-LONG	1-5/8" x 27-3/4"	(41mm x 705mm)	—	—	6
11318	FULL, HALF AND THIRD SIZE-SHORT	1" x 12-3/4"	(25mm x 324mm)	9	15	21
11319	SHEET PAN DIVIDER BAR	3-1/4" x 27-3/16"	(83mm x 706mm)	1	—	—
11320	SHEET PAN DIVIDER BAR	1-3/4" x 17-3/4"	(45mm x 451mm)	2	3	4
11357	SHEET PAN DIVIDER BAR	5-29/32" x 27-13/16"	(150mm x 706mm)	—	2	3
11732	SHEET PAN FILLER	3-3/4" x 27-13/16"	(95mm x 706mm)	—	—	1
1865	GASTRONORM DIVIDER (230V)	7/8" x 27-7/8"	(22mm x 708mm)	2	4	6



ED2-48 Heated Display Case with Carvery



ED2SYS-48

## ED2-48 Series • Service Parts

JUNE '03

Part Description	Qty.	Alto-Shaam Part No.	Part Description	Qty.	Alto-Shaam Part No.
1. CORD, (120/240V), 7' (2133mm)	1	CD-3291	14. TRACK, TOP	1	TK-25417
CORD, (230V), 7' (2133mm)	1	CD-3607	TRACK, BOTTOM	1	TK-25418
PLUG (COUNTERTOP UNITS, 120/240V ONLY)	1	PG-3267	15. GLASS, FULL SERVE, W/SILK SCREEN, 48"	1	GL-25420
2. INSULATION	2	IN-2203	GLASS, END, CLEAR	2	GL-25762
1/2" x 24" x 48" (13mm x 610mm x 1219mm)			GLASS, SELF SERVE (ED2-48P)	1	GL-25586
3. HEATING CABLE, 132' (40234mm)	1	CB-3045	CLAMP, GLASS	1	CM-25421
4. CONTROL			LATCH, GLASS, RETAINING	2	LT-2195
5. THERMOSTAT	2	TT-3498	HANDLE, GLASS (ED2-48)	1	1001656
THERMOSTAT KNOB	2	KN-3473	FRAME, GLASS, RIGHT HAND	1	5000241
THERMOSTAT, BEZEL	2	TT-3713	FRAME, GLASS, LEFT HAND	1	5000242
6. INDICATOR LIGHT (120/240V)	2	LI-3025	16. HINGE, PIVOT, CARTRIDGE	2	HG-23669
INDICATOR LIGHT (230V)	2	LI-3027	17. CUTTING BOARD ASSEMBLY	1	4016
7. SWITCH, BULB	2	SW-33896	CUTTING BOARD BRACKET BASE	2	11283
8. FUSE HOLDER (120V UNITS)	1	FU-3772	CUTTING BOARD BRACKET	2	BT-2342
FUSE, 15 AMP	2	FU-3775	18. HEAT GUARD, PASS THRU	1	GD-25577
9. TERMINAL BLOCK, MODULAR	1	BK-25432	19. PAN GRID, PASS THRU	2	PN-25752
10. BULBS (120/240V)	6	LP-33592	PAN DIVIDER, LONG	2	1000548
BULBS (230V)	6	LP-3384	PAN DIVIDER, SHORT	9	11318
11. RECEPTACLE, BULB (120/240V)	6	RP-3952	20. GAS STRUT, 95# (SELF-SERVE GLASS)	1	SU-24021
RECEPTACLE, BULB (230V)	6	RP-3955	PIN, HINGE, ANCHOR	4	PI-23678
12. GASKET, 7' (2133mm)	1	GS-22547	PIN, STRUT PIVOT	2	PI-23679
13. DOOR, GLASS, LEFT HAND	1	DR-25422	BUSHING, BEARING, NYLON	4	BU-2827
DOOR, GLASS, MID for RIGHT HAND	1	DR-25423	PLUG, WEAR	4	PG-2899
			PLUG, 4-WIRE	1	PG-3267
			21. LEGS, 4" (102mm)	4	LG-2044



**DISCONNECT UNIT FROM  
POWER SOURCE BEFORE  
CLEANING OR SERVICING**

### SAFETY ALERT

This unit's performance has been optimized using the factory provided bulbs. These bulbs should be replaced with an exact replacement or with a factory recommended replacement. These bulbs have been treated to resist breakage and must be replaced with similarly treated bulbs in order to maintain compliance with NSF standards.



### ED2-48 Series Cable Replacement Kit

#### Cable Heating Service Kit No. 4880

includes:

CB-3045	Cable Heating Element	134 feet
CR-3226	Ring Connector	.4
IN-3488	Insulation Corner	.1 foot
BU-3105	Shoulder Bushing	.4
BU-3106	Cup Bushing	.4
SL-3063	Insulating Sleeve	.4
TA-3540	High Temperature Tape	.1 roll
ST-2439	Stud, 10/32	.4
NU-2215	Hex Nut	.8



## ED2-72 Series • Service Parts

JUNE '03

Part Description	Qty.	Alto-Shaam Part No.	Part Description	Qty.	Alto-Shaam Part No.
1. CORD, (120/240V), 7' (2133mm)	1	CD-3291	14. TRACK, TOP	1	TK-25569
CORD, (230V), 7' (2133mm)	1	CD-3607	TRACK, BOTTOM	1	TK-25792
PLUG (COUNTERTOP UNITS, 120/240V ONLY)	1	PG-3267	15. GLASS, CENTER, DIVIDER, PASS THRU UNITS	1	GL-22049
2. INSULATION	2	IN-2203	GLASS, FULL SERVE, W/SILK SCREEN, 48"	2	GL-25420
1/2" x 24" x 48" (13mm x 610mm x 1219mm)			GLASS, SELF-SERVE, 24"	1	GL-25430
3. HEATING CABLE, 210' (64008mm)	1	CB-3045	GLASS, END, CLEAR	2	GL-25762
4. CONTROL			GLASS, FULL SERVE (72 PR/PL)	1	GL-25785
5. THERMOSTAT	2	TT-3498	GLASS, SELF SERVE (72P)	1	GL-25586
THERMOSTAT KNOB	2	KN-3473	CLAMP, GLASS	1	CM-25789
THERMOSTAT, BEZEL	2	TT-3713	LATCH, GLASS, RETAINING	2	LT-2195
6. INDICATOR LIGHT (120/240V)	2	LI-3025	HANDLE, GLASS (ED2-72)	1	1001657
INDICATOR LIGHT (230V)	2	LI-3027	FRAME, GLASS, RIGHT HAND	1	5000241
7. SWITCH, BULB	3	SW-33896	FRAME, GLASS, LEFT HAND	1	5000242
8. FUSE HOLDER (120V UNITS)	1	FU-3772	16. HINGE, PIVOT, CARTRIDGE	2	HG-23669
FUSE, 15 AMP	2	FU-3775	17. CUTTING BOARD ASSEMBLY	1	4017
9. TERMINAL BLOCK, MODULAR	1	BK-25432	CUTTING BOARD BRACKET BASE	2	11283
10. BULBS (120/240V)	10	LP-33592	CUTTING BOARD BRACKET	2	BT-2342
BULBS (230V)	10	LP-3384	18. HEAT GUARD, PASS THRU UNITS	1	GD-24852
11. RECEPTACLE, BULB (120/240V)	10	RP-3952	19. PAN GRID, PASS THRU	3	PN-25752
RECEPTACLE, BULB (230V)	10	RP-3955	PAN GRID, (PL or PR)	1	PN-25752
12. GASKET, 7' (2133mm)	1	GS-22547	PAN DIVIDER, LONG	4	1000548
13. DOOR, GLASS, LEFT HAND	1	DR-25422	PAN DIVIDER, SHORT	15	11318
DOOR, GLASS, MID	1	DR-25423	20. GAS STRUT, 50# (SELF-SERVE GLASS)	1	SU-22431
DOOR, GLASS RIGHT HAND	1	DR-25424	GAS STRUT, 140#	2	SU-22702
			PIN, HINGE, ANCHOR	4	PI-23678
			PIN, STRUT PIVOT	2	PI-23679
			BUSHING, BEARING, NYLON	4	BU-2827
			PLUG, WEAR	4	PG-2899
			PLUG, 4-WIRE	1	PG-3267
			21. LEGS, 4" (102mm)	4	LG-2044



**DISCONNECT UNIT FROM  
POWER SOURCE BEFORE  
CLEANING OR SERVICING**

### SAFETY ALERT



This units performance has been optimized using the factory provided bulbs. These bulbs should be replaced with an exact replacement or with a factory recommended replacement. These bulbs have been treated to resist breakage and must be replaced with similarly treated bulbs in order to maintain compliance with NSF standards.



### ED2-72 Series Cable Replacement Kit

#### Cable Heating Service Kit No. 4881

includes:

CB-3045	Cable Heating Element	.210 feet
CR-3226	Ring Connector	.12
IN-3488	Insulation Corner	.1 foot
BU-3105	Shoulder Bushing	.12
BU-3106	Cup Bushing	.12
SL-3063	Insulating Sleeve	.12
TA-3540	High Temperature Tape	.1 roll
ST-2439	Stud, 10/32	.12
NU-2215	Hex Nut	.24

## ED2-96 Series • Service Parts

JUNE '03

Part Description	Qty.	Alto-Shaam Part No.	Part Description	Qty.	Alto-Shaam Part No.
1. CORD, (120/240V), 7' (2134mm)	1	CD-3557	14. TRACK, TOP	1	TK-25791
CORD, (230V), 7' (2134mm)	1	CD-3304	TRACK, BOTTOM	1	TK-25793
PLUG (COUNTERTOP UNITS, 120/240V ONLY)	1	PG-3267	15. GLASS, CENTER, DIVIDER, PASS THRU UNITS	1	GL-22049
2. INSULATION	3	IN-2203	GLASS, FULL SERVE, W/SILK SCREEN, 48"	2	GL-25420
1/2" x 24" x 48" (13mm x 610mm x 1219mm)			GLASS, SELF-SERVE, 24"	1	GL-25430
3. HEATING CABLE, 245' (74676mm)	1	CB-3045	GLASS, END, CLEAR	2	GL-25762
4. CONTROL PLATE	3		GLASS, FULL SERVE (96 PR/PL)	1	GL-25785
5. THERMOSTAT	3	TT-3498	CLAMP, GLASS	1	CM-25790
THERMOSTAT KNOB	3	KN-3473	LATCH, GLASS, RETAINING	2	LT-2195
THERMOSTAT, BEZEL	1	TT-3713	HANDLE, GLASS (ED2-96)	1	1001658
6. INDICATOR LIGHT (120/240V)	3	LI-3025	FRAME, GLASS, RIGHT HAND	1	5000241
INDICATOR LIGHT (230V)	3	LE-3027	FRAME, GLASS, LEFT HAND	1	5000242
7. SWITCH, BULB	3	SW-33896	16. HINGE, PIVOT, CARTRIDGE	2	HG-23669
8. FUSE HOLDER (120V UNITS)	1	FU-3772	17. CUTTING BOARD ASSEMBLY	2	4016
FUSE, 15 AMP	2	FU-3775	CUTTING BOARD BRACKET BASE	4	11283
9. TERMINAL BLOCK, MODULAR	1	BK-25432	CUTTING BOARD BRACKET	4	BT-2342
TERMINAL BLOCK	1	BK-3021	18. HEAT GUARD, PASS THRU UNITS	1	GD-24852
10. BULBS (120/240V)	14	LP-33592	19. PAN GRID	1	contact factory
BULBS (230V)	14	LP-3384	PAN DIVIDER, LONG	6	1001461
11. RECEPTACLE, BULB (120/240V)	14	RP-3952	PAN DIVIDER, SHORT	21	11318
RECEPTACLE, BULB (230V)	14	RP-3955	20. GAS STRUT (FRONT GLASS)	1	SU-2870
12. GASKET, 7' (2134 mm)	1	GS-22547	GAS STRUT, 50# (SELF-SERVE GLASS)	1	SU-22431
13. DOOR, GLASS, LEFT HAND (ED2-48/72/96)	1	DR-25422	GAS STRUT, 195#	1	SU-22704
DOOR, GLASS, MID (ED2-48/72/96)	2	DR-25423	PIN, HINGE, ANCHOR	4	PI-23678
DOOR, GLASS, RIGHT HAND (ED-72/96)	1	DR-25424	PIN, STRUT PIVOT	2	PI-23679
			BUSHING, BEARING, NYLON	4	BU-2827
			PLUG, WEAR	4	PG-2899
			PLUG, 4-WIRE	1	PG-3267
			21. LEGS, 4" (102mm)	6	LG-2044



**DISCONNECT UNIT FROM  
POWER SOURCE BEFORE  
CLEANING OR SERVICING**

### SAFETY ALERT



This units performance has been optimized using the factory provided bulbs. These bulbs should be replaced with an exact replacement or with a factory recommended replacement. These bulbs have been treated to resist breakage and must be replaced with similarly treated bulbs in order to maintain compliance with NSF standards.

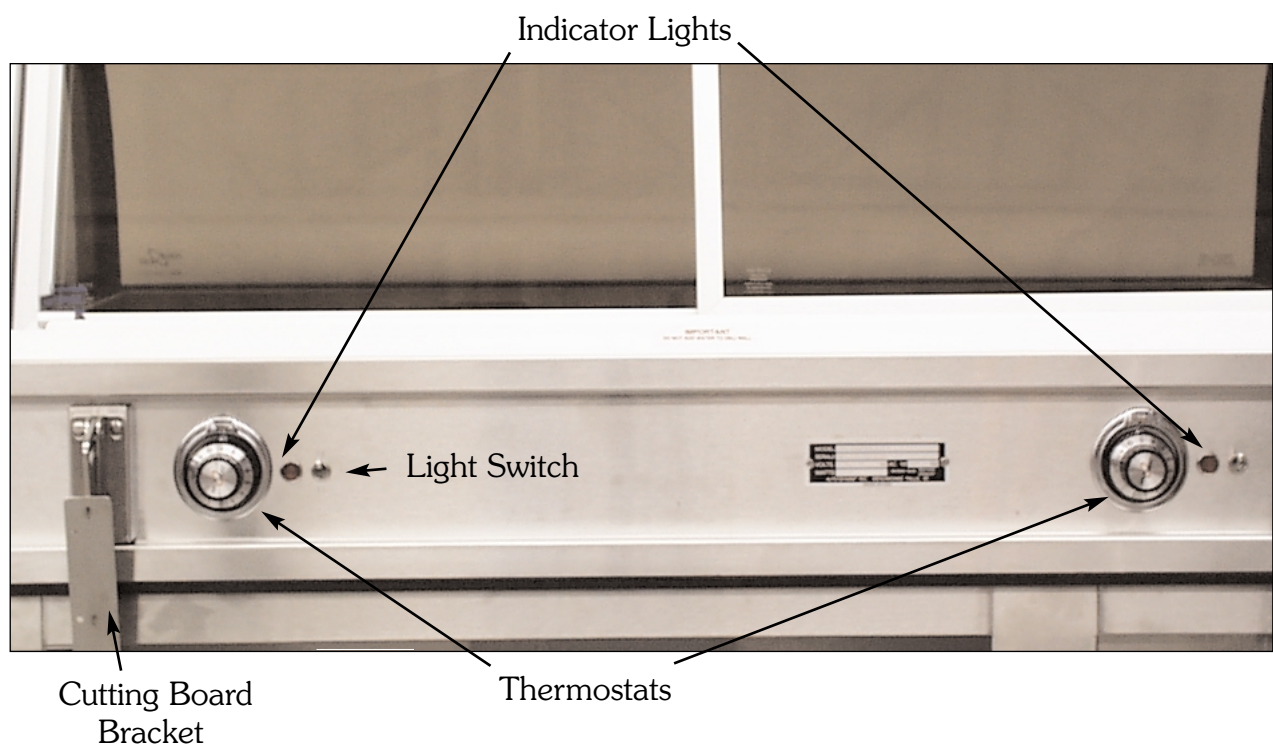


### ED2-96 Series Cable Replacement Kit

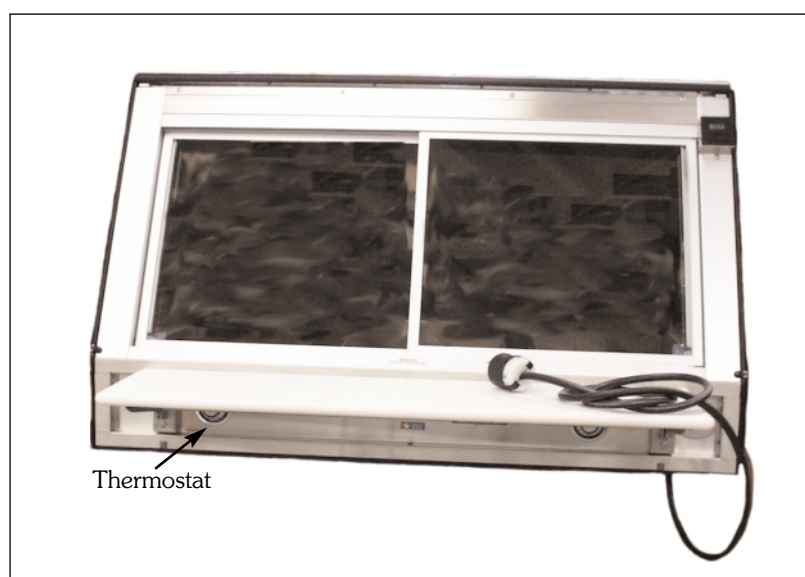
#### Cable Heating Service Kit No.14228

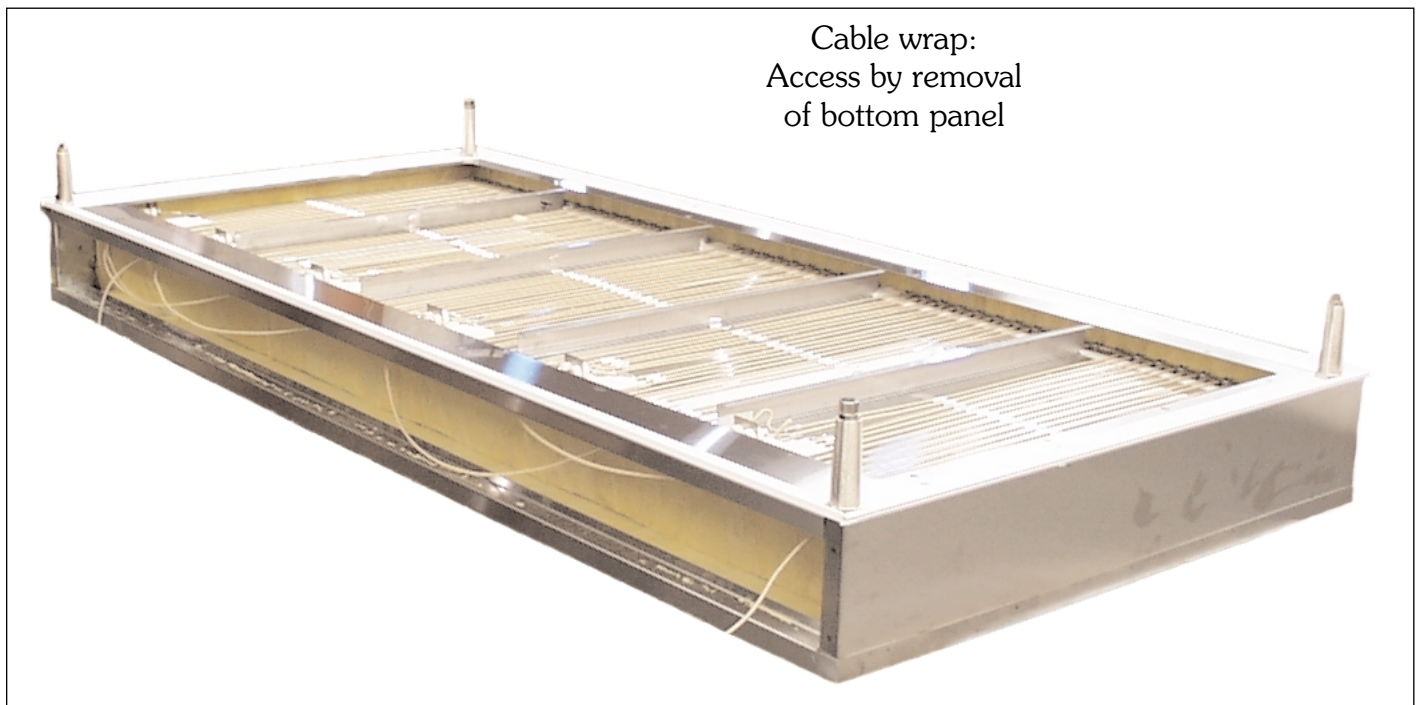
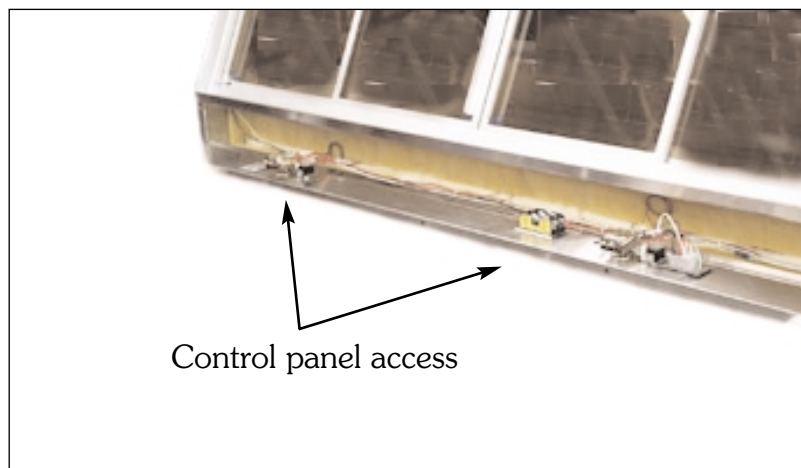
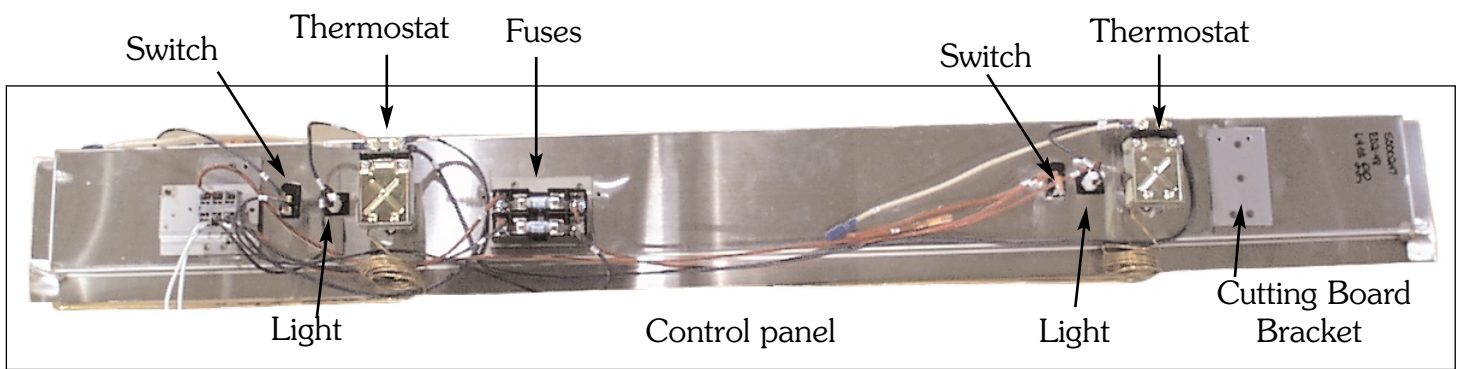
includes:

CB-3045	Cable Heating Element . . . . .	265 feet
CR-3226	Ring Connector . . . . .	8
IN-3488	Insulation Corner . . . . .	1 foot
BU-3105	Shoulder Bushing . . . . .	8
BU-3106	Cup Bushing . . . . .	8
SL-3063	Insulating Sleeve . . . . .	8
TA-3540	High Temperature Tape . . . . .	1 roll
ST-2439	Stud, 10/32 . . . . .	8
NU-2215	Hex Nut . . . . .	16

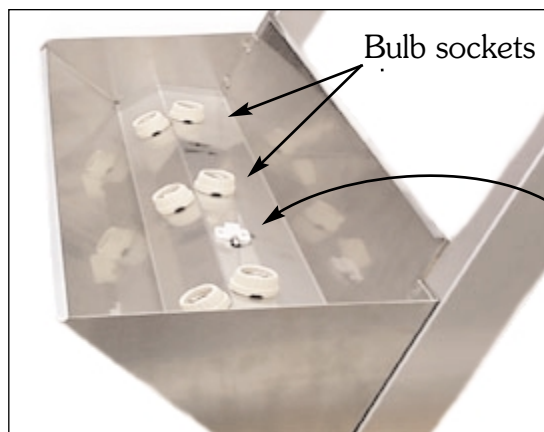
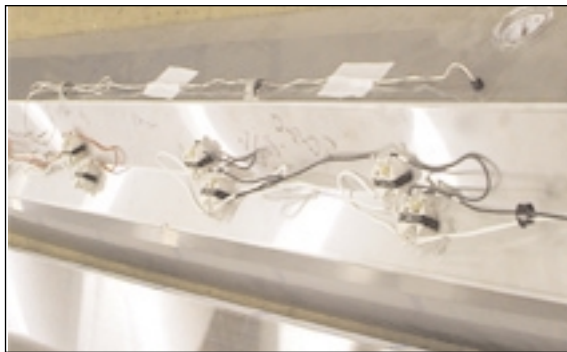


Operator/Control side with cutting board



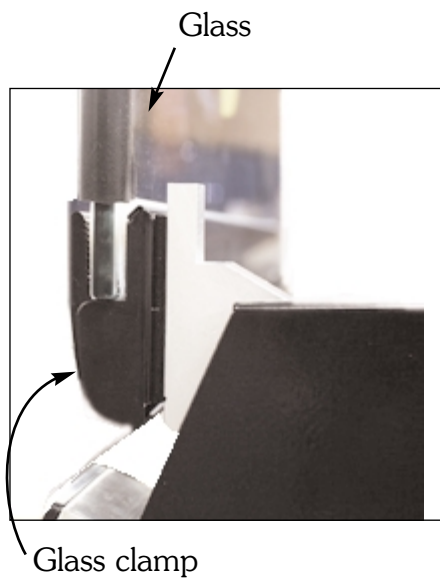


Inside the top - lights



Bulb sockets

Digital temperature sensor, option



Glass

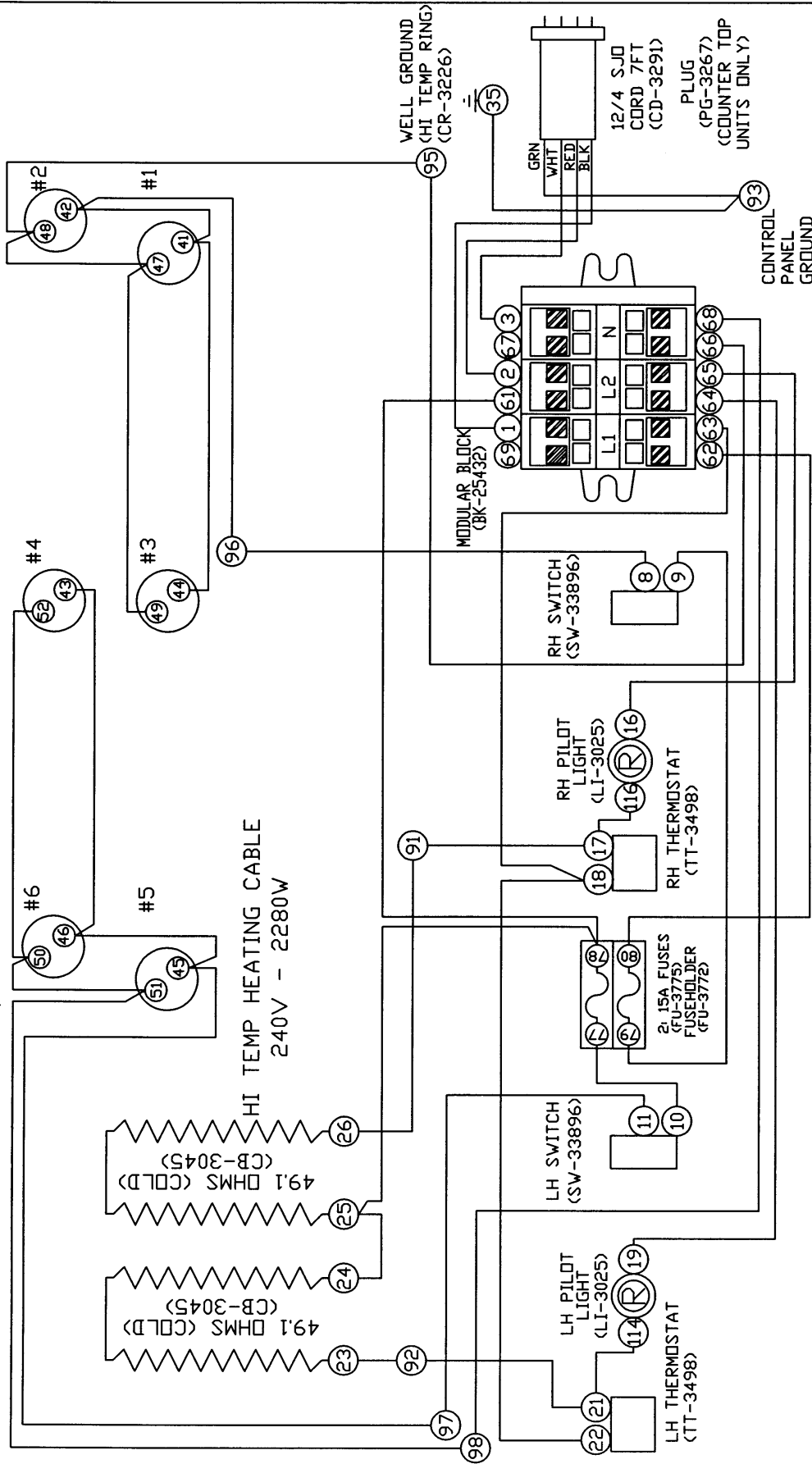
Glass clamp

Manual temperature gauge, option



6 LAMPS TYP.  
(LP-33592)  
100 WATTS, 130V EACH

NOTE #1: ALL NUMBERS IN ( ) = ALTO-SHAAM PART NO'S  
NOTE #2: SEE DRW. #A-8166 FOR WIRE ASSEMBLIES



# WIRING DIAGRAM

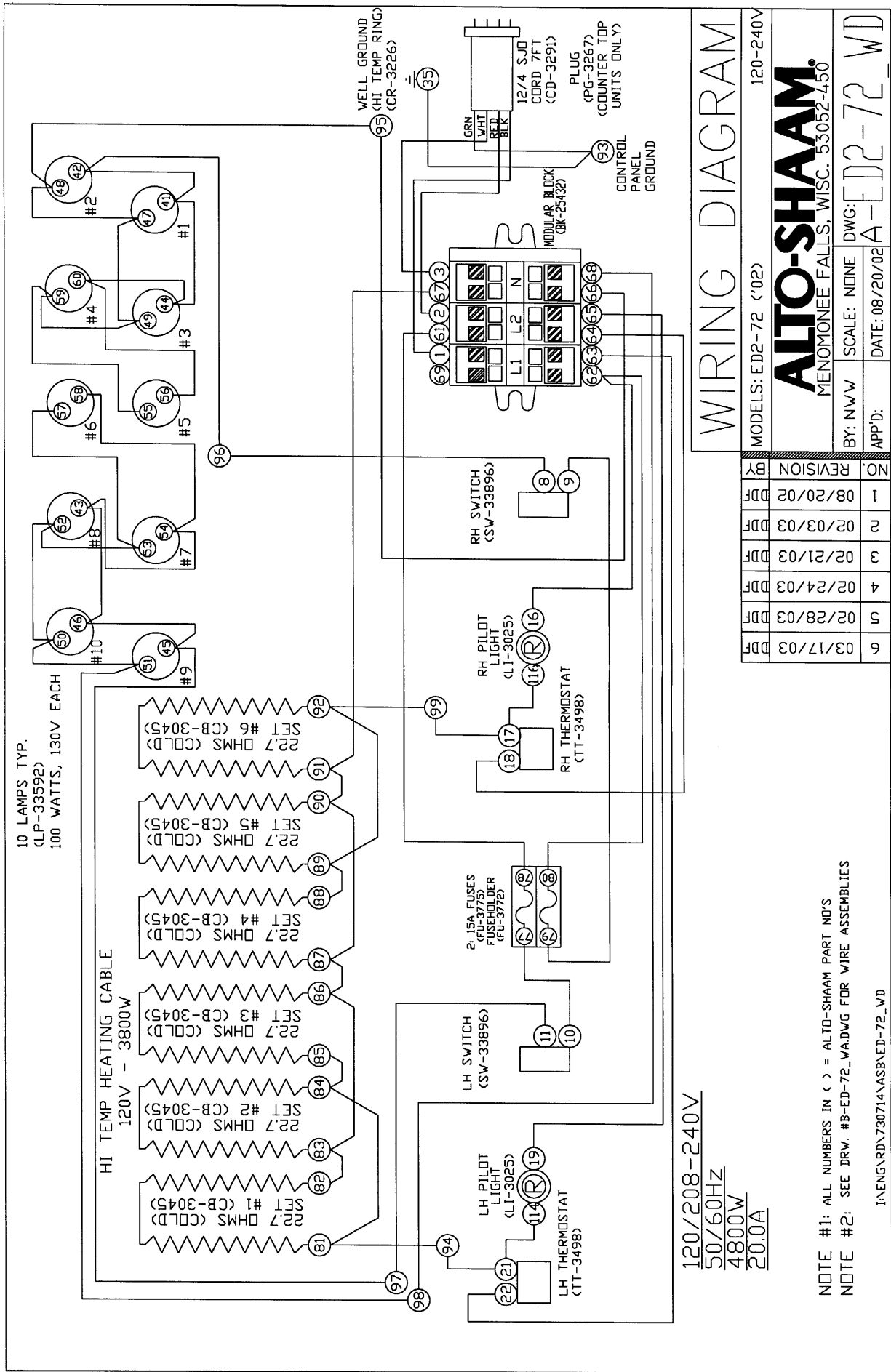
MODELS: ED2-48 & /P 120/208-240V

**ALTO-SHAAM**  
MENOMONEE FALLS, WISC. 53052-450

BY: AHL	SCALE: NONE	DWG: A-7661
APP'D: DDF	DATE: 06/11/03	

120/208V  
50/60HZ  
2400W  
12.0A

120/240V  
50/60HZ  
3350W  
14.0A



# WIRING DIAGRAM

MODELS: ED2-72 '02		120-240V	
<b>ALTO-SHAAM®</b>			
MENOMONEE FALLS, WISC. 53052-450			
BY: NWV	SCALE: NONE	DWG: ED2-72 WD	
APP'D:	DATE: 08/20/02		
NO.	REVISION	BY	
1	08/20/02	DDF	
2	02/03/03	DDF	
3	02/21/03	DDF	
4	02/24/03	DDF	
5	02/28/03	DDF	
6	03/17/03	DDF	

NOTE #1: ALL NUMBERS IN ( ) = ALTO-SHAAM PART NO'S  
NOTE #2: SEE DRW. #8-ED-72\_WA.DWG FOR WIRE ASSEMBLIES

I:\ENG\RD\730714\ASB\ED-72\_WD







# TRANSPORTATION DAMAGE and CLAIMS



All Alto-Shaam equipment is sold F.O.B. shipping point, and when accepted by the carrier, such shipments become the property of the consignee.

Should damage occur in shipment, it is a matter between the carrier and the consignee. In such cases, the carrier is assumed to be responsible for the safe delivery of the merchandise, unless negligence can be established on the part of the shipper.

1. Make an immediate inspection while the equipment is still in the truck or immediately after it is moved to the receiving area. Do not wait until after the material is moved to a storage area.
2. Do not sign a delivery receipt or a freight bill until you have made a proper count and inspection of all merchandise received.
3. Note all damage to packages directly on the carrier's delivery receipt.
4. Make certain the driver signs this receipt. If he refuses to sign, make a notation of this refusal on the receipt.
5. If the driver refuses to allow inspection, write the following on the delivery receipt:  
*Driver refuses to allow inspection of containers for visible damage.*
6. Telephone the carrier's office immediately upon finding damage, and request an inspection. Mail a written confirmation of the time, date, and the person called.
7. Save any packages and packing material for further inspection by the carrier.
8. Promptly file a written claim with the carrier and attach *copies* of all supporting paperwork.

We will continue our policy of assisting our customers in collecting claims which have been properly filed and actively pursued. We cannot, however, file any damage claims for you, assume the responsibility of any claims, or accept deductions in payment for such claims.

# ALTO-SHAAM<sup>®</sup> LIMITED WARRANTY

Alto-Shaam, Inc. warrants to the original purchaser that any original part that is found to be defective in material or workmanship will, at our option, subject to provisions hereinafter stated, be replaced with a new or rebuilt part.

The labor warranty remains in effect one (1) year from installation or fifteen (15) months from the shipping date, whichever occurs first.

The parts warranty remains in effect one (1) year from installation or fifteen (15) months from the shipping date, whichever occurs first.

Exceptions to the one year part warranty period are as listed:

- A. Halo Heat cook/hold ovens include a five (5) year parts warranty on the heating element. Labor will be covered under the terms of the standard warranty period of one (1) year or fifteen (15) months.
- B. Alto-Shaam Quickchillers include a five (5) year parts warranty on the refrigeration compressor. Labor will be covered under the terms of the standard warranty period of one (1) year or fifteen (15) months.

This warranty does not apply to:

1. Calibration
2. Replacement of light bulbs and/or the replacement of display case glass due to damage of any kind.
3. Equipment damage caused by accident, shipping, improper installation or alteration.
4. Equipment used under conditions of abuse, misuse, carelessness or abnormal conditions.
5. Any losses or damage resulting from malfunction, including loss of product or consequential or incidental damages of any kind.
6. Equipment modified in any manner from original model, substitution of parts other than factory authorized parts, removal of any parts including legs, or addition of any parts.

This warranty is exclusive and is in lieu of all other warranties, expressed or implied, including the implied warranties of merchantability and fitness for purpose. In no event shall the Company be liable for loss of use, loss of revenue, or loss of product or profit, or for indirect or consequential damages. This warranty is in lieu of all other warranties expressed or implied and Alto-Shaam, Inc. neither assumes or authorizes any persons to assume for it any other obligation or liability in connection with Alto-Shaam equipment.

## ALTO-SHAAM, INC.

Warranty effective January 1, 2000

Record the model and serial numbers of the unit for easy reference.

Always refer to both model and serial numbers in your correspondence regarding the unit.

Model: \_\_\_\_\_

Serial Number: \_\_\_\_\_

Purchased From: \_\_\_\_\_

## HALO HEAT COOK/HOLD/SERVE SYSTEMS BY ALTO-SHAAM<sup>®</sup>

W164 N9221 Water Street • P.O. Box 450 • Menomonee Falls, Wisconsin 53052-0450 • U.S.A.

PHONE: (262)251-3800 (800)558-8744 U.S.A./CANADA • FAX: (262)251-7067 (800)329-8744 U.S.A./CANADA • [www.alto-shaam.com](http://www.alto-shaam.com)

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